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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: RICHARD WASHINGTON ET AL.

Filed: DECEMBER 10, 2003

For: SLIP RING APPARATUS

Serial No.: 10/732,924

Group Art Unit: 2834

Examiner: UNKNOWN

Atty Dkt: COVI:005

Pursuant to 37 C.F.R. 1.8, I certify that this correspondence is being deposited with the U.S. Postal Service in a first class, postage prepaid envelope addressed to: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313 on the date below:

9-22-04 Maib Jones  
Date Name

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313

Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97, and 1.98, it is respectfully requested that this Information Disclosure Statement be entered and the document(s) listed on attached Form PTO-1449 be considered by the Examiner and made of record.

In accordance with 37 C.F.R. §§ 1.97(g),(h), this Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be an admission that (a) the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b); and/or (b) that the information cited is, or is considered to be prior art.

References C3 through C5 are photographs of the components of a floppy disk drive available from Teac Corporation prior to the January 2, 2003 filing date of U.S. Provisional Patent Application Serial No. 60/437,712 from which the patent application claims priority.

With regard to the photograph of reference C3, the component labeled "A" is a rotor component. Rotor component A includes a magnetic material that is labeled "1" in the photograph. Magnetic material "1" is attached to a metal housing labeled "2" in the photograph. It appears that the magnetic material "1" is a single strip of flexible rubber magnet material having opposing ends that are joined together to form a joint that is labeled "3" in the photograph. It appears that the material labeled "4" in the photograph is a magnetic commutator material that is attached to metal housing "2". An opening "8" is present in the center of the rotor component "A" for receiving a motor shaft.

The component labeled "B" in the photograph of reference C3 is a stator component. Stator component "B" includes a printed circuit board that is labeled "5" in the photograph. Printed circuit board "5" is attached to a metal base labeled "6" in the photograph. It appears that the structures labeled "7" are copper wire motor coils attached to the printed circuit board "5". It appears that printed circuit board circuitry labeled 10 is commutator circuitry. An opening "9" is present in the center of the stator component B for receiving the motor shaft.

Reference C4 is a photograph of rotor component "A" showing joint "3" formed by opposing ends of magnetic material "1".

Reference C5 is a photograph showing rotor component A and stator component B of reference C3 assembled together.

References C6 through C12 are photographs of the components of a camera positioning system which was available from PictureTel Corporation prior to the January 2, 2003 filing date of U.S. Provisional Patent Application Serial No. 60/437,712 from which the present application claims priority.

In reference C6, the component labeled “A” is a rotating camera component, and the component labeled “B” is a stationary base section of the camera positioning system. Rotating camera component “A” rotates relative to stationary base section “B” in a pan axis direction.

Reference C7 is a photograph of the disassembled bottom portion of camera base section “B” of reference C6. Reference C7 shows a top side view of a stationary component of base section “B” that includes a printed circuit board labeled “1”. Printed circuit board “1” has an opening labeled “2”. Reference C7 also shows two metal contacts labeled “3”.

Reference C8 is a close up photograph of the top side of printed circuit board “1”, showing opening “2” and the two metal contacts “3”.

Reference C9 is a photograph showing printed circuit board “1” attached by ribbon cable “5” to a stationary metal component “4” of base section “B”. Reference C9 also shows a rotating metal component labeled “6” that includes a shaft labeled “7”. When stationary metal component “4” is assembled to printed circuit board “1”, shaft “7” is received in opening “2” of printed circuit board “1”, and rotating metal component “6” rotates about the axis of shaft “7” relative to stationary metal component “4”. The surface of rotating component “6” includes two conductive traces labeled “8” that are contacted by the two metal contacts “3” when printed circuit board “1” is assembled to metal component “4”. Rotation is imparted to rotating component “6” by motor “11”.

References C10 and C11 show a bottom side view of printed circuit board “1” when it is assembled to stationary metal component “4”. References C10 and C11 show shaft “7” received in opening “2” of printed circuit board “1”, and shows metal contacts “3” that contact conductive traces “8” of rotating metal component “6” as it rotates about the axis of shaft “7”.

Reference C12 shows printed circuit board “1” assembled to stationary metal component “4”. Reference C12 shows the upper side of stationary metal component “4”, and shows a rotating camera yoke “9” that is dimensioned to support a camera and that is attached to a rotating yoke support “12”. Rotating camera yoke “9” and rotating yoke support “12” are coupled to rotate with rotating metal component “6” in the pan axis direction about shaft “7”.

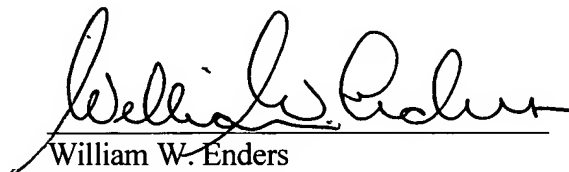
Motor "11" (shown in reference C9) is coupled to impart rotation to these components in the pan axis direction. Camera yoke "9" is coupled to motor "10" for rotation in the tilt axis direction.

The present Information and Disclosure Statement is being filed prior to the receipt of a first Official Action reflecting an examination on the merits, and hence is believed to be timely filed in accordance with 37 C.F.R. § 1.97(b). No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Commissioner is hereby authorized to deduct said fees from Deposit Account No. 10-1205/COVI:005.

A copy of the listed document(s) required by 37 C.F.R. § 1.98(a)(2) is enclosed for the convenience of the Examiner.

Applicant respectfully requests that the listed document(s) be made of record in the present case.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "William W. Enders", is written over a horizontal line.

William W. Enders

Reg. No. 41,735

Attorney for Applicant

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(512) 347-1611  
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Enclosures

**Form PTO-1449**

(modified)

Atty. Docket No.  
COVI:005Serial No.  
10/732,924

List of Patents and Publications for Applicant's

Applicant  
Washington et al.**INFORMATION DISCLOSURE STATEMENT**

(Use several sheets if necessary)

Filing Date:  
12/10/03Group:  
2834U.S. Patent Documents  
See Pages 1-2Foreign Patent Documents  
See PageOther Art  
See Pages 3-5**U.S. Patent Documents**

| Exam. Init. | Ref. Des. | Document Number | Date     | Name              | Class | Sub Class | Filing Date if App. |
|-------------|-----------|-----------------|----------|-------------------|-------|-----------|---------------------|
|             | A1        | 4,086,509       | 4/25/509 | Manson            |       |           | 9/3/76              |
|             | A2        | 4,209,213       | 6/24/80  | Wussow            |       |           | 4/10/78             |
|             | A3        | 3,837,229       | 9/24/74  | Stiles et al.     |       |           | 6/15/72             |
|             | A4        | 4,684,179       | 8/4/87   | Freeman           |       |           | 1/22/86             |
|             | A5        | 5,633,681       | 5/27/97  | Baxter et al.     |       |           | 3/6/95              |
|             | A6        | 6,049,967       | 4/18/00  | Feuer, Jr. et al. |       |           | 7/31/98             |
|             | A7        | 6,283,638       | 9/4/01   | Feuer, Jr. et al. |       |           | 1/18/00             |
|             | A8        | 5,901,429       | 5/11/99  | Crockett          |       |           | 7/3/97              |
|             | A9        | 6,222,297       | 4/24/01  | Perdue            |       |           | 9/24/99             |
|             | A10       | 4,281,328       | 7/28/81  | Shores            |       |           | 1/28/80             |
|             | A11       | 5,122,702       | 6/16/92  | Nakazato          |       |           | 7/26/91             |
|             | A12       | 6,356,308       | 3/12/02  | Hovanky           |       |           | 12/17/98            |
|             | A13       | 6,249,505       | 6/19/01  | Miyamoto et al.   |       |           | 10/11/00            |
|             | A14       | 6,628,338       | 9/30/03  | Elberbaum et al.  |       |           | 7/8/98              |
|             | A15       | 6,104,114       | 8/15/00  | Takeda et al.     |       |           | 7/10/98             |
|             | A16       | 4,093,897       | 6/6/78   | Fujita et al.     |       |           | 10/22/76            |
|             | A17       | 6,089,875       | 7/18/00  | Iwata et al.      |       |           | 5/18/99             |
|             | A18       | 5,355,043       | 10/11/94 | Kaneda            |       |           | 9/2/92              |
|             | A19       | 5,267,144       | 11/30/93 | Yoshida et al.    |       |           | 6/17/91             |
|             | A20       | 5,748,995       | 5/5/98   | Kitagawa et al.   |       |           | 9/12/96             |
|             | A21       | 5,828,503       | 10/27/98 | Kaneda et al.     |       |           | 11/14/95            |
|             | A22       | 5,814,962       | 9/29/98  | Mizumoto          |       |           | 6/6/96              |
|             | A23       | 5,473,368       | 12/5/95  | Hart              |       |           | 3/23/94             |

**Examiner:****Date Considered:**

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2834U.S. Patent Documents  
See Pages 1-2Foreign Patent Documents  
See PageOther Art  
See Pages 3-5**U.S. Patent Documents**

| Exam. Init. | Ref. Des. | Document Number | Date     | Name               | Class | Sub Class | Filing Date if App. |
|-------------|-----------|-----------------|----------|--------------------|-------|-----------|---------------------|
|             | A24       | 5,475,209       | 12/12/95 | Nabeshima          |       |           | 10/5/94             |
|             | A25       | 6,036,637       | 3/14/00  | Kudo               |       |           | 4/22/98             |
|             | A26       | 4,496,395       | 1/29/85  | Croat              |       |           | 6/16/81             |
|             | A27       | 4,802,931       | 2/7/89   | Croat              |       |           | 10/26/83            |
|             | A28       | 4,770,723       | 9/13/88  | Sagawa et al.      |       |           | 2/10/87             |
|             | A29       | 4,792,368       | 12/20/88 | Sagawa et al.      |       |           | 7/25/83             |
|             | A30       | 4,851,058       | 7/25/89  | Croat              |       |           | 9/3/82              |
|             | A31       | 5,645,651       | 7/8/97   | Fujimura et al.    |       |           | 6/7/95              |
|             | A32       | 4,921,551       | 5/1/90   | Vernia et al.      |       |           | 9/19/88             |
|             | A33       | 4,792,367       | 12/20/88 | Lee                |       |           | 3/17/86             |
|             | A34       | 4,588,439       | 5/13/86  | Narasimhan et al.  |       |           | 5/20/85             |
|             | A35       | 4,325,757       | 4/20/82  | Jandeska et al.    |       |           | 9/4/79              |
|             | A36       | 4,849,035       | 7/18/89  | Stadelmaier et al. |       |           | 5/9/88              |
|             | A37       | 4,144,060       | 3/13/79  | Jandeska et al.    |       |           | 2/3/78              |
|             | A38       | 4,123,297       | 10/31/78 | Jandeska et al.    |       |           | 8/1/77              |
|             | A39       | 4,151,435       | 4/24/79  | Jandeska et al.    |       |           | 5/5/78              |
|             | A40       | 4,076,561       | 2/28/78  | Lee et al.         |       |           | 10/15/76            |
|             | A41       | 4,104,787       | 8/8/78   | Jandeska et al.    |       |           | 3/21/77             |
|             | A42       | 4,694,235       | 9/15/87  | Flowers            |       |           | 8/1/86              |
|             | A43       | 4,845,411       | 7/4/89   | Smith              |       |           | 9/30/87             |

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|  |                                      |                                |                          |
|--|--------------------------------------|--------------------------------|--------------------------|
| <b>Form PTO-1449</b> (modified)  |                                      | Atty. Docket No.<br>COVI:005   | Serial No.<br>10/732,924 |
| List of Patents and Publications for Applicant's<br><br><b>INFORMATION DISCLOSURE STATEMENT</b><br><br>(Use several sheets if necessary) |                                      | Applicant<br>Washington et al. |                          |
|  |                                      | Filing Date:<br>12/10/03       | Group:<br>2834           |
| U.S. Patent Documents<br>See Pages 1-2   | Foreign Patent Documents<br>See Page | Other Art<br>See Pages 3-5     |                          |

| Foreign Patent Documents |           |                 |      |         |       |           |                    |
|--------------------------|-----------|-----------------|------|---------|-------|-----------|--------------------|
| Exam. Init.              | Ref. Des. | Document Number | Date | Country | Class | Sub Class | Translation Yes/No |
|                          | B1        |                 |      |         |       |           |                    |

| Other Art (Including Author, Title, Date, Pertinent Pages, Etc.) |           |  |
|--|-----------|--|
| Exam. Init.  | Ref. Des. | Citation   |
|  | C1        | Copending U.S. Application Serial No. 10/732,195, Filed December 10, 2003, "Electromagnetic Circuit And Servo Mechanism For Articulated Cameras" (COVI:003)  |
|  | C2        | DVD-ROM Spindle Motor, Eutronic Technology Co., Ltd., Rev. 1.1., December 2, 2002, 9 pgs.  |
|  | C3        | Photograph Of Product Available From Teac Corporation Prior To The January 2, 2003 filing date of U.S. Provisional Patent Application Serial No. 60/437,712 From Which The Present Application Claims Priority (See Text Of Accompanying Information Disclosure Statement For Description)       |
|  | C4        | Photograph Of Product Available From Teac Corporation Prior To The January 2, 2003 filing date of U.S. Provisional Patent Application Serial No. 60/437,712 From Which The Present Application Claims Priority (See Text Of Accompanying Information Disclosure Statement For Description)       |
|  | C5        | Photograph Of Product Available From Teac Corporation Prior To The January 2, 2003 filing date of U.S. Provisional Patent Application Serial No. 60/437,712 From Which The Present Application Claims Priority (See Text Of Accompanying Information Disclosure Statement For Description)       |
|  | C6        | Photograph Of Product Available From PictureTel Corporation Prior To The January 2, 2003 filing date of U.S. Provisional Patent Application Serial No. 60/437,712 From Which The Present Application Claims Priority (See Text Of Accompanying Information Disclosure Statement For Description) |
|  | C7        | Photograph Of Product Available From PictureTel Corporation Prior To The January 2, 2003 filing date of U.S. Provisional Patent Application Serial No. 60/437,712 From Which The Present Application Claims Priority (See Text Of Accompanying Information Disclosure Statement For Description) |

|   |                         |
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| U.S. Patent Documents<br>See Pages 1-2   | Foreign Patent Documents<br>See Page | Other Art<br>See Pages 3-5     |                          |

| Other Art (Including Author, Title, Date, Pertinent Pages, Etc.) |           |  |
|--|-----------|--|
| Exam. Init.  | Ref. Des. | Citation   |
|  | C8        | Photograph Of Product Available From PictureTel Corporation Prior To The January 2, 2003 filing date of U.S. Provisional Patent Application Serial No. 60/437,712 From Which The Present Application Claims Priority (See Text Of Accompanying Information Disclosure Statement For Description) |
|  | C9        | Photograph Of Product Available From PictureTel Corporation Prior To The January 2, 2003 filing date of U.S. Provisional Patent Application Serial No. 60/437,712 From Which The Present Application Claims Priority (See Text Of Accompanying Information Disclosure Statement For Description) |
|  | C10       | Photograph Of Product Available From PictureTel Corporation Prior To The January 2, 2003 filing date of U.S. Provisional Patent Application Serial No. 60/437,712 From Which The Present Application Claims Priority (See Text Of Accompanying Information Disclosure Statement For Description) |
|  | C11       | Photograph Of Product Available From PictureTel Corporation Prior To The January 2, 2003 filing date of U.S. Provisional Patent Application Serial No. 60/437,712 From Which The Present Application Claims Priority (See Text Of Accompanying Information Disclosure Statement For Description) |
|  | C12       | Photograph Of Product Available From PictureTel Corporation Prior To The January 2, 2003 filing date of U.S. Provisional Patent Application Serial No. 60/437,712 From Which The Present Application Claims Priority (See Text Of Accompanying Information Disclosure Statement For Description) |
|  | C13       | Ferro Tec USA, Domain Detection, <a href="http://www.ferrotec.com/usa/domain_detection.htm">http://www.ferrotec.com/usa/domain_detection.htm</a> , 2 pgs., printed off Internet on 12/5/03, and labeled "© 2001-2003"  |
|  | C14       | Ferro Tec USA, Ferrofluid Technology Overview, <a href="http://www.ferrotec.com/usa/ferrofluid_technology_overview.htm">http://www.ferrotec.com/usa/ferrofluid_technology_overview.htm</a> , 3 pgs., printed off Internet on 12/5/03, and labeled "© 2001-2003"                                  |
|  | C15       | Ferro Tec USA, Optical Pick Ups, <a href="http://www.ferrotec.com/usa/optical_pickups.htm">http://www.ferrotec.com/usa/optical_pickups.htm</a> , 2 pgs., printed off Internet on 12/5/03, and labeled "© 2001-2003"  |
|  | C16       | Ferro Tec USA, Other Applications, <a href="http://www.ferrotec.com/usa/other_applications.htm">http://www.ferrotec.com/usa/other_applications.htm</a> , 2 pgs., printed off Internet on 12/5/03, and labeled "© 2001-2003"  |
|  | C17       | Ferro Tec USA, Educational Kits, <a href="http://www.ferrotec.com/usa/educational_kits.htm">http://www.ferrotec.com/usa/educational_kits.htm</a> , 2 pgs., printed off Internet on 12/5/03, and labeled "© 2001-2003"  |

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| U.S. Patent Documents<br>See Pages 1-2   |  | Foreign Patent Documents<br>See Page | Other Art<br>See Pages 3-5 |

| Other Art (Including Author, Title, Date, Pertinent Pages, Etc.) |              |   |
|--|--------------|---|
| Exam.<br>Init.   | Ref.<br>Des. | Citation  |
|  | C18          | Ferro USA Corporation, Company profile, <a href="http://www.avem.org/MemDirF/Ferro.html">http://www.avem.org/MemDirF/Ferro.html</a> , 2 pgs., printed off Internet on 12/5/03 |
|  | C19          | Ferrofluidics Exclusion Seal Applications Manual, 1987, 14 pgs.   |

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